

Course: SIO 10 (The Earth)

Instructor: Dr. Adrian Borsa (SIO)

Textbook: "Earth: Portrait of a Planet" (Fifth Edition) by Stephen Marshak

Lectures: MWF 11:00~11:50, Center Hall 105

Instructor Office Hours: Wednesday 12:15~1:15 pm, Galbraith Hall 364

Grading: 40% weekly assignments, 30% mid-term exam, 30% final exam

Schedule:

Date	Day	Lecture #	Textbook Chapter Covered	Required Reading (Marshak, 5th edition)
April 3	M	Lecture 1	Introduction	none
April 5	W	Lecture 2	Chapter 1 Cosmology and the Birth of Earth	1.1, 1.2 (pp.13-18.5), 1.4, 2.2 (pp.37-38), Box 2.1
April 7	F	Lecture 3	Chapter 2 Journey to the Center of the Earth	2.1, 2.2, 2.3, 2.4, 2.5, Box 2.2, 2.6
April 10	M	Lecture 4	Chapter 3 Drifting Continents and Spreading Seas	3.1, 3.2, 3.4, 3.5
April 12	W	Lecture 5	Chapter 4 The Way the Earth Works: Plate Tectonics	4.1, 4.2, Box 4.1, 4.3
April 14	F	Lecture 6	Chapter 4 The Way the Earth Works: Plate Tectonics	4.4, 4.5, 4.6
April 17	M	Lecture 7	Chapter 4 The Way the Earth Works: Plate Tectonics	4.7, 4.8
April 19	W	Lecture 8	Interlude A Introducing Rocks	A.1, A.2, A.3
			Chapter 6 Up from the Inferno: Magma and Igneous Rocks	6.1, 6.2, 6.4, 6.5, 6.7
April 21	F	Lecture 9	Interlude B A Surface Veneer: Sediments and Soils	B.1, B.2
			Chapter 7 Pages of Earth's Past: Sedimentary Rocks	7.1, 7.2 (pp 203-204) 7.4, 7.5
April 24	M	Lecture 10	Chapter 8 Metamorphism: A Process of Change	8.1, 8.2, 8.5
			Interlude C The Rock Cycle in the Earth System	C.1, C.2, C.3
April 26	W	Lecture 11	Chapter 9 The Wrath of Vulcan: Volcanic Eruptions	9.1, 9.2, 9.3, 9.4
April 28	F	Lecture 12	Chapter 9 The Wrath of Vulcan: Volcanic Eruptions	Box 9.1, 9.5, 9.6, 9.7
May 1	M	Lecture 13	Chapter 10 A Violent Pulse: Earthquakes (Tsunamis in Lecture 23)	10.1, 10.2, 10.3, 10.4
May 3	W	Lecture 14	Chapter 10 A Violent Pulse: Earthquakes (Tsunamis in Lecture 23)	10.5, 10.6 (except Tsunamis), 10.7, Box 10.1, Box 10.2
May 5	F	Lecture 15	Midterm Review	
May 8	M	Mid-term		
May 10	W	Lecture 16	Chapter 11 Crags, Cracks, and Crumples: Crustal Deformation and Mountain Building	11.1, 11.2, 11.3, 11.4, 11.5
May 12	F	Lecture 17	Chapter 13 A Biography of Earth	13.1, 13.2, 13.3, 13.7, 13.8
May 15	M	Lecture 18	Chapter 14 Squeezing Power from a Stone: Energy Resources	14.1, 14.2, 14.3, 14.4, 14.5, 14.6, Box 14.1, Box 14.2
May 17	W	Lecture 19	Chapter 14 Squeezing Power from a Stone: Energy Resources	14.7, 14.8, 14.9, Box 14.3
May 19	F	Lecture 20	Interlude F Ever-Changing Landscapes and the Hydrologic Cycle	F.1, F.2, F.3, F.4, F.5, Box F.1, Box F.2
May 22	M	Lecture 21	Chapter 16 Unsafe Ground: Landslides and Other Mass Movements	16.1, 16.2, 16.3, 16.4, Box 16.2
			Chapter 10 Tsunamis	10.6 (Tsunami subsection)
May 24	W	Lecture 22	Chapter 17 Streams and Floods: The Geology of Running Water	17.1, 17.2, 17.3, 17.4, 17.5
May 26	F	Lecture 23	Chapter 17 Streams and Floods: The Geology of Running Water	17.6, 17.7, 17.8, 17.9, Box 17.2
May 29	M	Holiday		
May 31	W	Lecture 24	Chapter 18 Restless Realm: Oceans and Coasts	18.1, 18.2, 18.3, 18.4, 18.5
June 2	F	Lecture 25	Chapter 18 Restless Realm: Oceans and Coasts	18.6, 18.7, 18.8
June 5	M	Lecture 26	Chapter 21 Dry Regions: The Geology of Deserts	21.1, 21.2, 21.3, 21.4, 21.5, 21.6, Box 21.1
June 7	W	Lecture 27	Chapter 22 Amazing Ice: Glaciers and Ice Ages	22.1, 22.2, 22.3, 22.4, 22.6, 22.7
June 9	F	Lecture 28	Final Exam Review	

	Introduction
	The Rocky Earth
	The Dynamic Earth
	The Water Earth
	The Giving Earth